

Relevance and impact of neurography in Kazakhstan

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Introduction

Art therapy is a method of psychotherapy that uses creativity to help people solve emotional and psychological problems. In recent years, neurography, as one of the approaches in art therapy, has attracted more and more attention due to its ability to visualize inner experiences and help in personal growth. This method involves creating graphic drawings that help clients realize and transform their emotional states.

The purpose of this study is to assess how relevant neurography is in Kazakhstan and how this method affects adolescents. The research is aimed at analyzing the perception and application of neurography by specialists in the field of psychology and art therapy. To achieve this goal, interviews were conducted with professionals working in Shymkent to get an idea of the current state and perspective of the method in the local context. The interviews cover both Russian-speaking and Kazakh-speaking specialists, which allows us to consider the method in

The data obtained will help to better understand how effectively neurography can be applied in Kazakhstan and what its prospects are for the future. The study will provide valuable information for psychologists, educators and anyone interested in using art therapy to support adolescents.

The research aims to answer the following questions:

- How do specialists perceive this method and how much is it in demand in their practice?
- What results are observed in adolescents using neurography, and how is this method integrated into therapeutic and educational processes?

Literature Review

In recent years, Kazakhstan has seen an increase in interest in modern methods of art therapy, including neurography. A number of centers and programs, such as integrative art therapy, conducted within the framework of the Kazakh branch of the International Academy of Psychological Sciences, use both international practices and adapted techniques (Kassen, 2018).

For example, integrative art therapy in Kazakhstan focuses on using art for self-discovery and positive thinking, which indirectly contributes to the prevention of suicidal behavior and supports emotional well-being. Additionally, in Kazakhstan, author's techniques are actively used, such as Bakibek Talkambayeva's art therapy technique and Zhazira Janabayeva's mandala therapy, which are used both for working with children and adults (Kassen, 2018). These methods are based on ancient knowledge and proven practices, which gives them uniqueness and significance. Nevertheless, despite the growing interest and development of art therapy practices, there is a clear shortage of specialists in this field, especially in the northern, central and eastern regions of the country as noted by Professor Al Farabi Kazakh National University Kassen G.A.(2018). This highlights the need for further development and dissemination of knowledge about art therapy and neurography in Kazakhstan. Questions requiring further study include: how relevant is neurography to Kazakhstan's realities? What is the opinion of experts about its effectiveness in comparison with other methods? How does art therapy affect adolescents and young people in Kazakhstan?

Definition

Neurography and art therapy share a common ground in their use of creative expression to promote emotional well-being and cognitive development. Neurography, as described in Piskarev's article (2019), is a method that uses visual language and geometric archetypes to transform thinking. This method involves the creation of graphic images that help activate creative processes and neuroplasticity of the brain. Neurography is aimed at removing internal limitations and developing self-awareness through structured graphical exercises. The process includes visualization and interpretation of personal experiences and conflicts, which contributes to the elaboration of psychological blocks and the development of new patterns of thinking. Similarly, art therapy, as defined by the American Art Therapy Association (2017), is an area of mental health in which clients use artistic materials and a creative process led by an art therapist to explore their feelings, resolve emotional conflicts and develop self-awareness. Art therapy

uses a wide range of artistic forms, including drawing, painting and sculpture. The main goal of art therapy is to improve the mental and emotional state of the client, manage behavior and addictions, as well as develop social skills and increase self-esteem.

Neurography, although a separate method, is part of the broader field of art therapy. In the context of art therapy, neurography is used as one of the approaches aimed at working out psychological and emotional problems through artistic expression. Neurography is more focused on personal transformation through specific graphic techniques, while other types of art therapy are used in various clinical and educational contexts, which allows it to cover a wider range of problems and clients. While neurography offers a specific set of techniques for personal transformation, its integration into the broader framework of art therapy highlights the interconnection and complementary nature of various creative therapeutic approaches.

The effectiveness of neurography and art therapy

The emerging field of neurography offers a promising approach to psychotherapeutic work.

Piskarev (2019) and Ismailova and Portnova (2022) agree that neurography is a valuable tool for psychotherapeutic work that helps to work out internal conflicts and improve emotional state. While Piskarev emphasizes the methodological aspects and transformative power of neurography, Ismailova and Portnova focus on its practical effectiveness and application in the framework of art therapy. These studies confirm the importance of neurography as a method that can have a positive impact on psychoemotional health and offer new opportunities to work with clients in various therapeutic contexts.

Piskarev notes that neurography is a visual method that uses simple geometric shapes and lines to reflect and work through internal conflicts and limitations. This allows people to work through negative emotions, identify their true desires and goals, and improve their lives by interacting with their own neural connections on paper. Ismailova and Portnova (2022) focus on the

applicability of neurography in therapy, especially in conditions typical of Kazakhstan, where this method can become a significant addition to existing approaches in art therapy.

The combined results of these studies highlight the potential of neurography as a powerful tool in therapeutic practice, important for both individual and social well-being.

Historical development and other therapy methods

The historical evolution of art therapy, traced by Kiseleva (2023), reveals a rich palette of practices - from ancient sacred traditions to modern innovations such as neurography.

Kiselyova (2023) in her research examines in detail the development of art therapy, starting with ancient sacred practices and ending with modern methods such as neurography. Kiselyova's important contribution is the mention of the beginning of art therapy in 1938 using artistic creativity for the rehabilitation of children who survived World War II. Platonova (2014) continues this theme by focusing on a variety of art therapy methods, including neurography. Platonova confirms that modern art therapeutic methods, such as neurography, effectively help in the study of emotional problems and the development of self-awareness.

In contrast, Ted (1998) and O'Connor (2010) highlight the lack of scientific evidence for many popular claims about color therapy and warn against using them without proper verification. Thus, despite the importance of art therapy, color therapy requires more thorough scientific verification in order to justify its therapeutic claims. Ted (1998) explores the influence of color on the emotional and physiological state of a person. He notes that the red color can cause arousal and stimulation, whereas the blue color has a calming effect. In particular, research shows that the effect of color on a physiological response may depend on hue, not just on color saturation. O'Connor (2010), in an article on the psychology of color, also criticizes popular ideas about color therapy. She points out the lack of empirical data supporting many popular claims about the influence of color on the psychological state.

This historical perspective highlights the need for continued research to confirm the effectiveness of various art therapy methods, and recognizes the potential benefits of neurography and the importance of eliminating unfounded claims in areas such as color therapy.

Impact of Art Therapy on Teenagers and Adolescents

The power of art therapy in fostering the emotional and social development of children and adolescents is well-documented in the literature.

Both Malchiodi (2003) and Rubin (2010) highlight the significant benefits of art therapy for children and adolescents, such as improved self-expression and emotional regulation. In "The Art Therapy Sourcebook," Cathy Malchiodi (2003) discusses the benefits of art therapy for children and adolescents. Malchiodi emphasizes that art therapy aids in improving self-expression and emotional regulation, reducing anxiety and depression, and enhancing social skills. This is particularly critical during adolescence, a period marked by unique emotional and social challenges. Judith Rubin's "Introduction to Art Therapy: Sources & Resources" (2010) further explores the use of art therapy among youth. Rubin highlights that art therapy fosters cognitive and emotional skills development, helping adolescents to articulate their emotions more freely and constructively. She underscores the role of art therapy in supporting psychological well-being and developmental needs in young people. These findings align with Erkan and Muradova (2022), who document similar positive outcomes in Kyrgyzstan, suggesting that art therapy can effectively support the developmental needs of young individuals in diverse cultural contexts. The Kyrgyzstan study's primary objective was to explore research concerning preschool institutions in Kyrgyzstan. The study employed qualitative research methods, specifically content analysis, to examine the scope of dissertations, theses, books, and scientific papers related to art therapy.

These studies together demonstrate the value of art therapy as a therapeutic method that can be effectively integrated into various settings to solve the unique problems faced by children and adolescents in the process of their development.

Data and Methodology

To conduct the study, qualitative data were collected based on semi-structured interviews conducted with two groups of specialists: professional psychologists and psychology teachers who work in the field of art therapy, in particular, with the method of neurography. The study participants live and work in Shymkent, Kazakhstan. Professional networks such as psychological associations, educational institutions and counseling centers were used to select participants. Recommendations from colleagues and acquaintances were also used. Participants had to have qualifications in psychology and experience working with art therapy, especially with neurography. Experts with different levels of experience were selected to get a variety of opinions. An official invitation was sent to all potential participants, explaining the objectives of the study, the methodology of the interview and guarantees of confidentiality. Participation was voluntary. The interviews were conducted online via video communication platforms such as Zoom, which allowed for flexibility and accessibility for participants. The interviews were semi-structured, which made it possible to ask pre-prepared questions. The questions were grouped by topics: general questions about professional activity, art therapy and neurography. The average length of the interview ranged from 20 minutes to 50 minutes, depending on the degree of detail of the participants' responses.

Each interview began with profiling questions aimed at collecting demographic information and professional experience of the participants. The questions included age, number of years of professional activity, availability of special education in the field of psychology, country of study, city of residence, as well as the language in which professional activity is conducted. These data provided a better understanding of the context in which the participants work and took into account cultural and linguistic characteristics in the analysis of their responses. In the first part of the interview, the participants shared their knowledge and understanding of art therapy, gave their own definition of this method, described the changes they observe in

adolescents after art therapy sessions, and talked about cases when they recommend this method. The use of art therapy in their practice was also discussed. The main part of the interview was devoted to the method of neurography. The participants described the degree of their awareness of the method, gave their own definition of neurography, and discussed places and ways to study it. Special attention was paid to the discussion of the relevance of neurography in Kazakhstan, its future, frequency of use in practice and effectiveness in working with clients. The participants also shared their experiences, discussed cases when neurography did not bring the expected results, and compared this method with other approaches in psychotherapy.

Additional questions have been added for teachers regarding the use of neurography in the school environment. It was discussed how relevant the method is for the school system in Kazakhstan, how its use affects the behavior and emotional state of students, as well as the results that can be observed in school practice. Teachers also shared their experience of integrating art therapy into the curriculum and discussed the reaction of parents and school administration to the use of these methods.

All interviews were recorded with the consent of the participants for accuracy and completeness of the data. All recorded interviews and transcripts were stored in secure electronic files with limited access. In order to ensure confidentiality, the personal data of the participants has been anonymized. Names and identifying information were excluded from the published results.

The collected data represent a rich material for analysis, since they include a variety of opinions and experiences in the use of neurography both in psychological practice and in the educational environment.

Findings

This analysis presents data from respondents working in the field of psychology, with different seniority, age, location and educational background. These differences in professional paths and life experiences bring a variety of shades and accents to their ideas about art therapy.

The respondents' experience as psychologists, including as school workers, range from 8 to 22 years of experience, which greatly affects their understanding of art therapy. The most experienced respondent with 22 years of experience has in-depth knowledge, which is reflected in her practical application of art therapy and understanding of its long-term impact on children. Another respondent has 16 years of experience, which also indicates a significant practical base, but her approach is focused on relevant methods and adaptation of techniques. The rest of the respondents approach art therapy from the point of view of personal growth and overcoming internal conflict, while the last respondent, although she has less experience (8 years), focuses on the historical context and the development of the method.

The age of the respondents also brings diversity to their views. Older respondents demonstrate a deeper understanding and historical perspective of art therapy, which is reflected in their explanations of its origin and development. Younger respondents are guided by modern practical applications, including art therapy methods such as gizotherapy¹ and dance and movement therapy, as well as the impact of art therapy on personal development and self-esteem. The location of specialists also influences their approaches. Respondents from Shymkent may have differences in the perception of art therapy due to regional characteristics and cultural contexts, while respondents from Kyzylorda may take into account the peculiarities of the local context and bilingualism (Russian and Kazakh) in their practice.

The education of the respondents varies from pedagogical to psychological, which also makes differences in their approaches to art therapy. Respondent 1 has a medical background, which

¹ is one of the most common and widely used types of art therapy. This is a solution to various problems with the help of fine art.

may influence her approach to therapy as a clinical tool. Respondents 2 and 3 with a degree in educational psychology and Respondent 3 with a degree in psychology consider art therapy with an emphasis on educational and historical aspects, respectively. Respondent 4, with a philological education, emphasizes the use of art as a therapeutic tool, focusing on its universality.

The respondents' definition of art therapy covers both practical and theoretical aspects. Some psychologists focus on the use of art and therapy methods, which emphasizes their practical orientation. While Respondent 2 focuses on personal change and self-esteem, and the rest provide a historical context that demonstrates the development of art therapy as a methodology. The impact of art therapy on adolescents varies depending on the respondents' approach. Respondent 1 and Respondent 4 see art therapy as a way to relieve anxiety and overcome negative emotions, while the rest focus on personal growth and liberation, improving trust and self-understanding. These differences demonstrate the versatility of approaches to art therapy and its adaptability to different age groups and needs.

Thus, differences in work experience, age, place of work and education of respondents lead to multifaceted views on art therapy.

Neurography

Half of the respondents describe neurography as a technique that promotes the transformation of the unconscious. The main goal here is to help the client realize the hidden answers to his questions and problems that are in the unconscious. It is also seen as a way to integrate various aspects of personality and harmonize the inner state. The purpose of the method is to identify and work out internal conflicts through awareness and interpretation of drawings. They focus on removing mental limitations and achieving goals through neuropsychological processes. In this case, neurography is used to overcome barriers that prevent the achievement of desired results.

They also describe the process of neurography as the creation of lines that help the client see and realize ways to solve their problems and emphasize the dialogue between the conscious and subconscious through lines and strokes. The process of interpreting drawings plays a key role in the client's awareness of his internal conflicts. The very process of drawing is important, which contributes to the disclosure of the unconscious. And others see neurography as a tool for working through emotions, feelings, and goals. Here, the method is focused on more utilitarian tasks, such as dealing with anxiety and fears in children in an educational context. Also, according to them, neurography can be easily integrated into educational and therapeutic practices. The main goal is to use the method for simple therapeutic tasks that do not require deep immersion into the unconscious. They describe neurography as a process similar to working with mind map, where the problem is brought to the surface and worked through awareness and use of color. The process does not require in-depth analysis, it is more focused on visualization and working with color. They also consider neurography as a simple and easily integrated technique that requires minimal artistic skills. The process involves drawing and using the available tools, which makes the method convenient to use.

However, only half of the respondents use the method in their practice. They mention that neurography is used as an element of general art therapy. In this case, the method is not the main one, but it is integrated into a broader practice aimed at working with various emotional and psychological conditions. School psychologists also confirm the use of neurography in the context of art therapy methods in school practice. The method is considered as part of a set of tools used in the educational environment. One respondent has just started studying neurography, but already sees its potential in therapy, especially in working with children. An example is the successful application of the method to support students in preparing for exams and in unlocking their inner potential. And only one specialist uses neurography as a way of concentration and grounding, but only for personal purposes. Here, the method is used to work with current conditions, without being used in professional activities with clients. She admits that she has not

studied neurography and is only superficially familiar with this method through social networks and YouTube. The method was not used in her professional activities, and interest in it was limited. Another respondent instead prefers metaphorical association cards², which, in her opinion, are more convenient and effective in counseling. She believes that not all clients are ready to draw and express their thoughts through drawing, which limits the use of neurography.

As a result of the analysis, it can be concluded that the use of neurography in the practice of psychologists varies greatly. This difference shows that neurography, despite its growing popularity, remains a tool that does not attract all specialists. The choice for or against the method often depends on professional preferences, the target audience, and the perception of the effectiveness of the method in the context of specific therapeutic tasks.

All respondents agree that additional certification and training are important for specialists who want to work with neurography. They emphasize that certification promotes professionalism and allows deeper mastery of the methodology. After all, certification is necessary, since every specialist must choose techniques and methods that are suitable for him and his field of work. One specialist emphasizes that the training should be deep and serious. She criticizes short-term courses that give out specialists without sufficient training. It is important for her that psychologists are well-read and able to express their thoughts correctly. In her view, certification is not just a formality, but an indicator of true professionalism.

The respondents' answers to the question about evaluating the effectiveness of neurography show a general positive attitude, but each of the specialists focuses on various aspects of this method. They also emphasize the importance of using different methods depending on the age of the client. Many focus on the practical application of neurography and its impact on clients. Respondent 1 describes a specific example of a psychological game in which elements of art therapy, including neurography, are used to bring together a team and adapt children to a new environment. This respondent emphasizes that the results of working with neurography are

² are cards with images that people can associate with the events of their life.

visible in practice, leading to improved communication and the development of creative abilities. He also added that isotherapy works best with younger children, as children easily express their thoughts and feelings through drawing and projective techniques. For teenagers, he recommends more active forms of art therapy, such as dance and movement therapy and metaphorical association cards (MAC), which help to relieve tension and get an emotional charge. Respondent 3 also confirms the effectiveness of neurography, noting its positive effect on children, who, thanks to this technique, cope better with stress, improve communication with parents and psychologists, increase self-esteem and get rid of depression. This respondent emphasizes that neurography combined with art therapy helps children express their feelings more freely, which contributes to overall harmony in their lives. 2 Respondents assess the effectiveness of neurography through the prism of demand for this technique. They note that interest in neurography is growing, which indicates its usefulness and relevance. According to this respondent, if the technique did not produce results, it would quickly lose popularity. The second psychologist perceives neurography as a promising direction that will continue to develop, due to its effectiveness and demand among specialists and clients. The fourth specialist suggests a more philosophical approach to evaluating the effectiveness of neurography, arguing that the key factor for success is personal motivation and a person's willingness to work on themselves. According to this therapist, neurography will be effective only when a person sincerely gives himself to this process with thoughts and feelings. This respondent sees the effectiveness of the technique in its ability to help students discover their freedom and express their inner feelings through drawing. She also divides approaches according to age, emphasizing that methods such as drawing, storytelling and memorizing proverbs are best suited for children, which help in developing confidence. For adults, she offers art therapy in the context of family relationships, which allows solving internal and interpersonal conflicts. Others emphasize the importance of a careful and environmentally friendly approach when working with new methods, especially when working with adolescents and the older generation. They note that the proposal of a new

method requires delicacy: first you need to offer it to the client and observe how suitable it is and how the client reacts to it. And only the third respondent suggests a specific separation of methods by age: for younger children, he recommends sand therapy, emphasizing its fascination and simplicity. For older children and adolescents, the respondent suggests isotherapy, considering it an effective and accessible form of art therapy that helps to express inner feelings through drawing.

Is Neurography Relevant to the Kazakhstani Context?

Two specialists note that interest in art therapy, including neurography, is growing every year. She sees great potential in this method, noting that it does not require significant resources, but can give good results. The respondents are confident that in the future, neurography may become part of the curriculum for educational psychologists, which indicates its high relevance in educational institutions. In addition, they note that neurography is becoming more and more popular. Previously, less was said about it, but now the method is gaining momentum due to positive results from customers. Respondent 4 believes that in the next 2-3 years, neurography will be fully integrated in Kazakhstan. He sees this method as a prospect for improving the work of psychologists, especially with clients who find it difficult to express their thoughts in words. The introduction of neurography, in his opinion, will make the work of psychologists more effective and help to better understand the needs of clients.

The other half of the specialists, on the contrary, indicate that among their colleagues there are no those who would be engaged in neurography. Her environment mainly uses gestalt therapy and transactional analysis. She emphasizes that she has no experience with this method and has not observed its implementation in a professional environment. This indicates that in some circles, neurography has not yet been widely recognized and implemented.

Judging by the presented data, neurography is becoming increasingly relevant in Kazakhstan, especially in the field of art therapy. Some experts are showing growing interest and optimism,

seeing significant potential in this method. They believe that neurography, which is resource-efficient and produces positive results, may soon become standard practice in educational psychology and therapy. These specialists foresee that neurography can be fully integrated into psychological practice in Kazakhstan over the next 2-3 years, especially for clients experiencing difficulties with verbal self-expression. However, the findings also show that neurography has not yet been widely recognized and accepted by the entire professional community. Some experts report that their colleagues are more inclined to other therapeutic methods, such as gestalt therapy and transactional analysis, and have little or no experience working with neurography. This indicates that although neurography is gaining momentum, it has not yet been widely recognized or implemented in all professional circles in Kazakhstan. In conclusion, it is worth to note that neurography is relevant and is becoming increasingly important in Kazakhstan, but currently its recognition by various professional groups varies.

Limitations and Implications

One of the most serious limitations was the time frame in which the study was conducted. The timing of the study was tight, which meant that only a limited number of interviews could be conducted. This limitation made it difficult to explore the topic in more depth or conduct follow-up interviews that could provide additional information. The short duration of the study also precluded the possibility of using a longitudinal approach, which would allow observing the long-term effects and stability of neurography as a therapeutic method in practice. Another major limitation was the availability of resources, including financial and human capital. Financial constraints limited travel, thereby limiting the geographical scope of the study to Shymkent. This focus on one place may not fully reflect the broader practice and perception of neurography throughout Kazakhstan, especially in regions with different cultural or socio-economic backgrounds. The sample size also posed problems. A small number of specialists participated in the study, all of whom lived in Shymkent. This lack of diversity in the sample may have led to

a homogeneity of viewpoints, which limited the possibility of generalizing the results to other regions or demographic data within Kazakhstan.

Another significant limitation was the novelty of neurography as a therapeutic method in Kazakhstan, which led to a shortage of existing literature and established research frameworks. The lack of comprehensive academic resources on neurography in the local context made it difficult to compare the results of this study with previous studies, thereby limiting the possibility of confirming the results or including them in a broader academic discourse.

Finally, the study was limited to the cultural context in which it was conducted. Neurography is a relatively new concept in Kazakhstan, and there may be cultural differences in the perception and application of art therapy and neurography compared to other regions where these methods are more common. The lack of widespread acceptance and adoption of neurography in certain professional circles, as noted by some respondents, highlights the cultural and professional gap that the study was unable to bridge due to its limited coverage.

Despite these limitations, the study offers several valuable insights for the future of neurography and art therapy in Kazakhstan and for therapeutic practice in general. One of the most important results of this study is that it can serve as a basis for future research in the field of neurography and art therapy. Future research could eliminate the limitations of this study by expanding its geographical scope to include other regions of Kazakhstan or even other countries, thereby providing a more complete understanding of how neurography can be adapted to different cultural contexts. The results of this study highlight the growing interest in neurography among professionals, which highlights the need for comprehensive training and certification programs. The study found that although some practicing psychologists are beginning to study neurography, there is significant demand for formal education and certification to ensure that these professionals are properly trained to use the method effectively. The development of standardized curricula, including both theoretical and practical components,

could increase the credibility and effectiveness of neurography as a therapeutic tool. Moreover, such programs could help narrow the gap between those who currently use neurography and those who hesitate due to a lack of formal training.

Another important result of this study is the possibility of integrating neurography into educational institutions as a tool to support the emotional and psychological well-being of adolescents. The findings suggest that neurography can be particularly effective in helping students cope with stress, increase self-esteem, and strengthen their overall mental health. This opens up opportunities for future research to explore how neurography can be systematically integrated into school curricula, especially in psychological and counseling services offered in educational institutions. Researchers could study the impact of such integration on student academic performance, both academically and emotionally, and develop recommendations for educators and school psychologists on how to effectively integrate neurography into their practice.

The fact that the study focused on neurography in the context of Kazakhstan provides valuable information about the importance of culturally adapted therapeutic methods. The experiences and perceptions shared by the participants highlight the need for therapeutic practices that take into account the cultural and social nuances of the population they serve. Future research could build on this by exploring how neurography can be adapted to meet the specific needs of different cultural groups in Kazakhstan or other regions with similar cultural contexts. This may include modifying methods or integrating elements of traditional Kazakh art and culture to make neurography more accessible and effective for local clients.

Conclusion

The main purpose of this study was to study the relevance and application of neurography, a modern method of art therapy, in the context of Kazakhstan, paying special attention to its impact on adolescents. Since neurography attracts attention all over the world, the purpose of

this study was to understand how it is perceived by professionals in Kazakhstan, and to assess its potential impact when integrated into therapeutic and educational processes. The key questions underlying this study were: how do specialists perceive and use neurography in their practice? What results are observed in adolescents undergoing neurography sessions? And how is this method integrated into therapeutic and educational institutions?

To answer these questions, the study used a qualitative research approach, data was collected through semi-structured interviews with psychologists and psychology teachers in Shymkent, Kazakhstan. The participants were selected based on their experience with art therapy, in particular neurography. These interviews provided rich qualitative data that allowed for an in-depth analysis of the participants' experiences, their perceptions, and the practical application of neurography in their work. The interviews were carefully analyzed to identify common themes, variations in the use of neurography, and the broader implications of its use in both therapy and education. During the research, answers to the questions were successfully found, although with some nuances. The results showed that neurography is perceived by some specialists as a valuable and effective tool for working with adolescents, especially to help them cope with emotional and psychological problems. However, neurography has not yet become widespread. Some specialists are enthusiastic about its capabilities and introduce it into their practice with positive results, while others are more hesitant due to lack of formal training or familiarity with this method. Such variability in the application and understanding of neurography highlights both the promise of the method and the problems that remain with its wider implementation.

The main conclusions from the study include the recognition that neurography has significant potential as a therapeutic and educational tool in Kazakhstan, especially for adolescents who may benefit from non-verbal forms of expression of emotions. The study shows that there is a clear need for more extensive training and certification programs for wider recognition and effective use of neurography. In addition, further research is needed to study the long-term

effects of neurography and to adapt the method to the specific cultural and regional conditions of Kazakhstan. In addition, the results obtained lay the foundation for future research that could expand this knowledge, which would ultimately help establish neurography as a recognized and effective therapeutic tool in Kazakhstan, and possibly in other regions.

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